SEQUENCE LISTING

<110> Vasta, Gerardo R.
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<120> Assay for Perkinsus in Shellfish

<130> 4115-137 CIP

<140> US 09/771,935
<141> 2001-01-30

<150> US 08/900,117
<151> 1997-07-25

<150> US 60/023,345
<151> 1996-07-26

<160> 25

<170> PatentIn version 3.1

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actagtgaac atagtttata acattgtcca aggggtggag ggggatgcgc gaaatcgatg   180

tgcacgtttg gtcaaagatg ctcgcgaaag ctgcacatca atttcgcaca tgggcgaaat   240

tgacttgcag gtgggtataa aagttgatgt aggccatgtg gctcgatttc aaccatatgg   300

gtatgcttct gaggatgggg tgttacagtg gaccatatga ggtaggtcat ttggagatgt   360

caccaaaatg gtctaaatct gcgcattcca tttaagtgaa tttaagtgaa atttaagtga   420

attttactta aaattgacct ttttcgttgc gcagatttgg ggtggtgatg ggtgacgcgg   480

cgaatttttt aaaaaagagg tatatcgcgt gctatttgta tttttggtat caccgcgtca   540

ccaatcacca ttgacggttt cttttttcgaa gttttttccgg attattgcat tttttatata   600

attgtgggtg gctgattctt gcgaaaggac tgttgtgatg tccgagttcc caaattggga   660

gttttttggac atcactcctg atctgccggc ggcgatcagg atgactgaca tttcgatata   720

ttttgggtat tcgatagctg ccaaatcggt cagcgtcgag tattccggtt tattcgaagg   780

attcatgata ttgcaaaata tcattgattt tcatggggtt ttgtattagt acccgctcat   840

tgtgggaaag tcgggtggat ttatcttacc cgcaaatcta atacaagatt tgcatgatgc   900

agcaatagac caaggttagt atagcagttg tatttatacg actagttatg caaacccttt   960

gtgttttttg ttgcgactct tggcgtgaac cggaagaccg gacctcgctt tcgactattc   1020

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atctttgatg gatatgagat cgcaagggta tcgcttcgtg cgatatttag tgaccatcag    1080

agcacgctac gacttttgat tatatccttg gatttaatcg gaagctcgca agcattgcat    1140

tgatgcaatc                                                            1150
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<212>  DNA
<213>  Perkinsus sp.

<220>
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<222>  (1)..(1550)
<223>  The nucleotide sequence of the NTS of rRNA of P. andrewsi, isolat
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cacaaattct caaattggac aacattggac aaaaattcac aacatacatt ggacaacagt     180

ggacaacgaa cccaaacccg acaacattgt ccagggggat agggggtgaa aaagcagtgc     240

cggcaaagtc gaaagatgtc aagttggaat gcggctcaaa ttcgtcattt gtgtaaatcc     300

gcaattttgc caatgtgcaa ttttgcaaat gtgcaatttt gcaaatgtgc aattttgcca     360

atgtgcaatt ttgcaaatgc gcaattttgc aaatccgcaa ttttgcaaat gtgcaatttt     420

ggaaaatcac caaatgaaaa tcgtccaagt cgaattggag gcgtggtgac atggtcccgg     480

gatcccctgg ttacagtgga caatatccca gcaatattcg ctgtaatttg gagtttcgct     540

gttttggcaa attttgagtc tgaaaaaaaa aattgcaaat gcgcaaaggg ggtgaaggaa     600

aaaaaagcac ccccgaaggt aaaattccct ttaagtccct tgcgcatttg caaaattttc     660

aaaaattgtt gcaaatgcgc ttttgttatt tggccggttc attggtgtca aaagttgcct     720

ggggtggtta cacaatgcac ggaattggtt ggaagttgtg tgattgaaaa ttggtcgtgt     780

cacacaattt tgcgcatttg caaaaattcg caaattggac aaaaaagggt cgcgcacagt     840

caaattgcgc aaatttcact ttgaagtgag tgcgcatttg tggggcagaa atgtggtgac     900

agcatcgttt tttataataa atattctata tttagtatct ttattataat ttgctgtcac     960

caatcaccat tttagaattt ttattttttt atgttttagt gaccgcggga ttttttgcaa    1020

agtactattg tgatgtttga gttgttgaa atgggcaatt tagaacatca tcagaaatcg      1080

ctgaatagtg attttgagt ttgactgttt gaagtgtttt gggtattcgg cagctgccaa     1140

atcggtcagc gtcgaatata atagcatttt tgtgtgtata tgatatttag cgatatcatt    1200

ggaatcatgg ggttttgtat tagtacccgc tcattgtggg aatgtcgggt ggttcaatat    1260

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gctgattatt cggcttatta tgcagaccta tcgtgttagt agttgcgact cttggcgtga      1380

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attgcacatt ttgcgtgata taaacgtgat catctgagca cgcttcgact cttggatatc      1500

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<212>   DNA
<213>   Perkinsus sp.

<220>
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tgtcaatttt gacagtgtgt gaaaaaactg aaaaagtcca ctcaacattg cattatgcaa       180

tttgccactc aacattgtcc aggggggatag ggggtgaaaa agtatcgcag tccaactgaa      240

aagatgctaa gttgaaatgc ggcgcaaatt catcacttga gttgcgaaaa tccctaaagt       300

cgaatttggc actcggtgac atgatcggga atttccctgg ttacagtggt caaatcccag       360

caattttggc aaagtttttg agtttcgcac ttttcgcaaa tttcgtgtct gaaaaaaaaa       420

tttcaacttt gcgcaaaggg gtcaaaggga aaaaaagcac cctcaaaagg aaatttccct       480

ttaatcccct ttgaaaaaaa tgcgcaaagt taaatttgcg aaaatttcga ttttctcata       540

tgaccgatta gttggtgcca gatggtagtc gggatggtta cacggtgcac ggaactcgtt       600

ggaagttctg gagttacgaa ttggtcccgt caccacaatt tgcgcatttt tgaaattgcg       660

caaatttgcg aaaaaagcag cgcgcaaagt taaattgtgc gaaaattgac tttcaggtcg       720

gtgcgcaaat ttggggtgaa aaagtggtga cagcatcaga attataataa ataatctata      780

atctagttct tttattataa ttagctgtca ccaatcacca tttgagattt tttatttttt      840

tatgttttag tgaccgcggt attttttcca gagtactatc gtgatgtctg agttgtctaa       900

aacggcaatt tcagaacatt accagaaaac actgaatagt ggtttctgag tctgactgtt       960

tgaagtgttt tgggtattcg gcagctgcca attcggtcag ggttgaatat actaacattt      1020

ctgtgtgtat atggtattta gcgatatcat tggaatcatg gggtttttgta ttagtacccg     1080

ctcattgtgg gaaagtcggg tggttcaata tcacctgcaa atttaataca ggatttgcat      1140

gatgcagcga ctgaccgggg ttagtataat agctgattat tcggcttatt atgcagacct      1200

atcgtgttag tagttgcgac tcttggcgtg aaccggaaga ccggaacttg atttcgacta      1260
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tttacgtccg taacacgtcc gtaaacagga gatttcaaga atattgcaca ttttgtgtga   1320

tataatcgtg atcatctgag cacgcttcga ctcttgaata tttgttaaac aaccgatatt   1380

cgggagctcg caagcattgc aattgatgca atc   1413

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<220>
<221>   misc_feature
<222>   (1)..(21)
<223>   Forward primer (5'-3').

<400>   4
cacttgtatt gtgaagcacc c   21

<210>   5
<211>   21
<212>   DNA
<213>   Perkinsus marinus

<220>
<221>   misc_feature
<222>   (1)..(21)
<223>   Reverse primer (5'-3').

<400>   5
ttggtgacat ctccaaatga c   21

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<212>   DNA
<213>   Perkinsus marinus

<220>
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<223>   Forward primer (5'-3').

<400>   6
atgctagccc atagaacagt   20

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<211>   20
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<213>   Perkinsus marinus

<220>
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<222>   (1)..(20)
<223>   Reverse primer (5'-3').

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<210>  8
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<213>  Perkinsus atlanticus

<220>
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<222>  (1)..(22)
<223>  Forward primer (5'-3')


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<213>  Perkinsus atlanticus

<220>
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<222>  (1)..(20)
<223>  Reverse primer (5'-3')


<400>  9
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<210>  10
<211>  24
<212>  DNA
<213>  Perkinsus sp.

<220>
<221>  misc_feature
<222>  (1)..(24)
<223>  NTS7 forward primer (5'-3') for Perkinsus andrewsi


<400>  10
aagtcgaatt ggaggcgtgg tgac                                         24


<210>  11
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<212>  DNA
<213>  Perkinsus sp.

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<223>  NTS6 reverse primer for Perkinsus andrewsi


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<211>  19
<212>  DNA
<213>  Perkinsus sp.

<220>
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<222>  (1)..(19)
<223>  Generic forward primer (5'-3') PER1 for P. marinus, P. atlanticus
       and P. andrewsi.

<400>  12
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<210>  13
<211>  17
<212>  DNA
<213>  Perkinsus sp.

<220>
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       and P. andrewsi

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tgcaatgctt gcgagct                                                    17


<210>  14
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<212>  DNA
<213>  Perkinsus sp.

<220>
<221>  misc_feature
<222>  (1)..(22)
<223>  Forward SSU3F primer (5'-3') for P. andrewsi

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agttggattt ctgccttggg cg                                              22


<210>  15
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<212>  DNA
<213>  Perkinsus sp.

<220>
<221>  misc_feature
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<223>  Forward SSU4F primer (5'-3') for P. andrewsi

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accaggtcca gacataggaa gg                                              22


<210>  16
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<212> DNA
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<220>
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<223> A nucleotide sequence of the ITS1-5.8. S ITS2 regions of P. andre
      wsi

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tgtttagatc cccacacctg accgctttaa cgggccgggt aggtgcataa cttctatgaa   120

ccaattgtac tagtctaaag tatccaatat ccttttggat tttggtattt caaaacgaaa   180

ttccaaactc tcaacgatgg atgcctcggc tcgagaatcg atgaaggacg cagcgaagtg   240

cgataagcac tgcgatttgc agaattccgt gaaccagtag aaatctcaac gcatactgca   300

caaaggggat ttatcctctt tgtacataca tatcagtgtc gctcttcttc ccgatacaaa   360

cattttgttg atttacaatc aacattatgc tttgtatccc gcttggattc ctttattggg   420

atccgctgtg tgcgcttgct gacacaggcg cattaatttg caaggctata atactactgt   480

actgtagccc cttcgcaaga aggactgcgc tagtgagtat ctttggatgc tcgcgaactc   540

gactgtgttg tggttgattc cgtgttcctc gatcacgcga ttcatcgctt caacgcatta   600

tgtcaaattt gatgaatgca gagagttgtt tatgaattac gcgatcgctt tggtctcaga   660

atcgttacta tagcacgctt gtcggtttgc aacctggcaa tatgtcatca tt   712

<210> 17
<211> 1808
<212> DNA
<213> Perkinsus sp.

<220>
<221> misc_feature
<222> (1)..(1808)
<223> A nucleotide sequence of the SSU rRNA of P. andrewsi

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agtataagct ttaaacggcg aaactgcgaa tggctcatta aaacagttat agtttatttg   120

gtgatcgatt actatttgga taaccgtagt aattctagag ctaatacatg cgtcaaggcc   180

cgacttcgga agggctgcgt ttattagata cagaaccaac ctagctccgc ctagtccttg   240

ttggtgattc ataataaccc ggcgaatcgc acggcttgtc cggcgatgga ccattcaagt   300

ttctgaccta tcagctatgg acggtagggt attggcctac cgtggcgttg acgggtaacg   360

gggaattagg gttcgattcc ggagagggag cctgagaaac gactaccaca tctaaggaag   420

gcaacaggcg cgcaaattac ccaatcctga tacagggagg tagtgacaag aaataacaat   480

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acagggcaat tctgtcttgt aattggaatg agtagatttt aaatctcttt acgagtatca      540

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aagttgttgc ggttaaaaag ctcgtagttg gatttctgcc ttgggcgacc ggtccacctt      660

tcctacgggt taggttggta ccaggtttga ccttggcttt ttcttgggat tcgtgctcac      720

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tcagcacctc gtgagaaatc aaagtctttg ggttccgggg ggagtatggt cgcaaggctg     1140

aaacttaaag gaattgacgg aagggcacca ccaggagtgg agcctgcggc ttaatttgat     1200

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gtgagctgtc cggactgcga ttagttcagt ttctgttctt ttcgcgggaa gttctgcaaa     1740

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gatcattc                                                                1808
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<210>  18
<211>  1147
<212>  DNA
<213>  Perkinsus atlanticus

<220>
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atgttatccc agctcaacaa cgagcaacag tgctatggca agtagtccac tagagagcca      120

agtcgacaat ctctacaaca ttgtccaagg gggaaagggg ggcgcgcgaa gttgacctgc      180
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agcagaggga aaagatgctg agttttgctg caccccaact ttgcgcactt ggcgaagttg    240

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catcattatc gaggtctgtg gtgacgatgg actagttttt agggattttc cggaggtgtc    360

accacggacc ccccaacttt gcgcacgggg ggtactcaat tttaagtgaa atttaagtaa    420

aatttactta aaattcacgt ttttgggtgc gcaaagttga ggtggtgact ggtgacacga    480

aaattttaaa aaagagagat attaaaaaaa tatttatatt ttctgtgtca ccgtgtcacc    540

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attgagggtt tttggacatc gctctgaaat cgctaacggc gtttcagatt tccgactttt    720

cgacatattc tgggtatttg atagctgcca aatcggtcag cgtcgaatat tccaatattt    780

cgaaggatat atgatatcgc gagatatcat tggatttcat ggggttttgt attagtaccc    840

gctcatcgtg ggaaagtcgg gtgaatttat tcaacccgca aatctaatac aagatttgca    900

tgatgcagcg actgaccggg gtgagtgtag cagctgttct acggcttgct acgcagacct    960

atcgtgttag tagttgcgac tcttggcgtg aaccggaaga ccggacctcg ctttcgacta   1020

ttcattccga tgaatatgag attgcaaggg tatcgcttcg tgcgatattt agtgatcatc   1080

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tgcaatc                                                            1147
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<210>   19
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<212>   DNA
<213>   Perkinsus sp.

<220>
<221>   misc_feature
<222>   (1)..(19)
<223>   Generic forward PER1 primer (5'-3') for P. marinus


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<213>   Perkinsus marinus

<400>   20
atgctagccc atagaacagt                                                 20


<210>   21
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<213>   Perkinsus marinus
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<400>  21
catctccaaa tgacctacct                                              20


<210>  22
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<213>  Perkinsus marinus

<400>  22
atgctagccc acatcacagc                                              20


<210>  23
<211>  20
<212>  DNA
<213>  Perkinsus marinus

<400>  23
catctccaaa tgacctacca                                              20


<210>  24
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<212>  DNA
<213>  Perkinsus marinus

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gtgcacgttt ggtcaaagat gctcgcgaaa gctgcacatc aatttcgcac atgggcgaaa  180

ttgacttgca ggtgggtata aaagttgatg taggccatgt ggctcgattt caaccatatg  240

ggtatgcttc tgaggatggg gtgttacagt ggaccatatc aggtaggtca tttggagatg  300

tcaccaa                                                            307


<210>  25
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<212>  DNA
<213>  Perkinsus marinus

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gacgagtgaa catagtttat aacattgtcc aaggggtgga gggggatgcg cgaaatcgat  120

gtgcacgttt ggtcaaagat gctcgcgaaa gctgcacatc aatttcgcac atgggcgaaa  180

ttgacttgca ggtgggtata aaagttgatg taggccatgt ggctcgattt caaccatatg  240

ggtatgcttc tgaggatggg gtgttacagt ggaccatatg tggtaggtca tttggagatg  300

tcaccaa                                                            307
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